

laying normally begins in the Malay Peninsula, with replacements or late breeding running on until the middle or end of July. The earliest reported June dates for Malayan waters are those given by E. F. Allen & Berwick (1950: 33) for Fairway Rock (7 clutches, 8 June), White Rock (about 12 clutches, 9 June) and Turtle Rock (1 clutch, 8 June) off the Perak coast. F. G. H. Allen found three clutches on Squance Rock, in the Johore Strait, on 12 June. The Raffles Museum collection contains eggs taken by Madoc on 14 June on Tokong Burong, west of Tioman (1934) and Pulau Jemor, off the coast of Selangor (1937). The majority of the clutches examined by the present writer on Pulau Yu on 12 July were moderately fresh, but a few were well incubated; no chicks were seen there, nor on any of the other colonies examined in the Johore-Pahang Archipelago during the succeeding week. Coope took fresh eggs on Tokong Burong, in the Pulau Tenggara group, as late as 29 July. Further north, in the Redang group, I found that the great majority of the eggs had hatched by 9 August, and some of the chicks were as much as 140 mm. long. E. F. Allen & Berwick (*loc. cit.*) refer to eggs taken in the Sembilan group as late as 14 August.

These birds lay again after their eggs have been taken. According to the boatmen in the Johore-Pahang Archipelago, they may replace their clutches two or three times before they abandon the attempt for the season. As nearly all the larger accessible colonies in Malayan waters are robbed fairly regularly it is almost impossible to determine the close of the laying season under fully natural conditions. In the Gulf of Siam, as we have seen, laying apparently starts early in May, and normally ceases in the latter part of June. The Malayan birds seem to begin about three to four weeks later. Where they are not disturbed the peak period is probably the second half of June and the first two weeks of July. Certainly on the east side they cannot normally go on much beyond the end of July as the weather begins to break in the second half of September, and at least the more exposed breeding sites are apparently abandoned by the end of the month. Presumably eggs found after the first week in August are final replacements, with a relatively poor chance of survival.

In young nestlings (exposed culmen about 9–12 mm.) the down is white, sometimes slightly tinged with buffish on the forehead, crown, hind-neck and scapular region. In older birds it has a marked greyish or buffish tinge above, but remains a uniform white below. Later it becomes fairly thickly spotted with black on the upper parts (exposed culmen about 15 mm. or more).